



ICAO ENGINE EXHAUST EMISSIONS DATA SHEET

SUBSONIC ENGINES

ENGINE IDENTIFICATION: PW812D BYPASS RATIO: 4.5
 UNIQUE ID NUMBER: 05P25PW205 PRESSURE RATIO (π_{co}): 34.8
 COMBUSTOR: TALON X
 ENGINE TYPE: MTF RATED THRUST (F_{oo}) (kN): 61.6

REGULATORY DATA

CHARACTERISTIC VALUE:	HC	CO	NO _x	SMOKE NUMBER
D_p/F_{oo} (g/kN) or SN	0.4	31.9	50.8	0.0
AS % OF ORIGINAL LIMIT	2.2	27.1	46.4	0.0
AS % OF CAEP/2 LIMIT (NO _x)			58.0	
AS % OF CAEP/4 LIMIT (NO _x)			62.4	
AS % OF CAEP/6 LIMIT (NO _x)			66.0	
AS % OF CAEP/8 LIMIT (NO _x)			72.3	

For non-volatile particulate matter (nvPM) emissions, please refer to the ICAO Engine nvPM Emissions Data Sheet.

DATA STATUS

- PRE-REGULATION
 x CERTIFICATION
 - REVISED (SEE REMARKS)

TEST ENGINE STATUS

x NEWLY MANUFACTURED ENGINES
 x DEDICATED ENGINES TO PRODUCTION STANDARD
 - OTHER (SEE REMARKS)

EMISSIONS STATUS

x DATA CORRECTED TO REFERENCE
 (ANNEX 16 VOLUME II)

CURRENT ENGINE STATUS

(IN PRODUCTION, IN SERVICE UNLESS OTHERWISE NOTED)
 - OUT OF PRODUCTION (DATE: -)
 - OUT OF SERVICE (DATE: -)

MEASURED DATA

MODE	POWER SETTING (% F_{oo})	TIME (minutes)	FUEL FLOW (kg/s)	EMISSIONS INDICES (g/kg)			SMOKE NUMBER
				HC	CO	NO _x	
TAKE-OFF	100	0.7	0.660	0.02	0.04	21.00	0.0
CLIMB OUT	85	2.2	0.544	0.03	0.05	17.22	0.0
APPROACH	30	4.0	0.187	0.04	2.57	12.69	0.0
IDLE	7	26.0	0.070	0.17	15.63	5.19	0.0
LTO TOTAL FUEL (kg) or EMISSIONS (g)			253	23	1819	2954	-
NUMBER OF ENGINES				3	3	3	3
NUMBER OF TESTS				6	6	6	6
AVERAGE D_p/F_{oo} (g/kN) or AVERAGE SN (MAX)				0.4	29.5	48.0	0.0
SIGMA (D_p/F_{oo} in g/kN, or SN)				0.1	1.1	1.1	0.0
RANGE (D_p/F_{oo} in g/kN, or SN)				0.3-0.5	28.7-30.7	46.7-48.7	0.0

ACCESSORY LOADS

POWER EXTRACTION 0 (kW) AT All POWER SETTINGS
 STAGE BLEED 0 (% CORE FLOW) AT All POWER SETTINGS

ATMOSPHERIC CONDITIONS

BAROMETER (kPa)	99-101.6
TEMPERATURE (K)	279.6-300.8
ABS HUMIDITY (kg/kg)	0.0024-0.0138

FUEL

SPEC	Jet A-1
H/C	1.91
AROM (%)	17.2-18.1

MANUFACTURER: Pratt & Whitney Canada
 TEST ORGANIZATION: PW800 Development Engineering
 TEST LOCATION: Longueuil, Quebec, Canada
 TEST DATES: 06/05/2020-31/07/2022

NO_x REGULATION PARAGRAPH

	2.3.2 c) (CAEP/4)
	2.3.2 d) (CAEP/6)
x	2.3.2 e) (CAEP/8)

REMARKS

- Export classification: US EAR: 9E991, Outside US EAR: NSR, EIPA (ECL): NSR.
- P&WC ER 9208 Rev. D.
- Engines tested: E5756B01, GD0016B02, GB0005B01.
- Smoke Number below limit of detection for smoke number measurement technique.
- Data acquired using procedures & systems prescribed in Annex 16, Vol. II, Amd. 10.
- Fuel venting report: P&WC ER9207 Rev. A.

Compliance with Fuel Venting requirements:

x ('x' if complies, 'PR' if pre-regulation, '- ' if information is not available)